

Commonwealth of Kentucky
Division for Air Quality
PERMIT STATEMENT OF BASIS

FINAL
Conditional Major, Minor Revision
Permit: V-06-045 R1
HOPKINSVILLE, KENTUCKY
NOVEMBER 6, 2008
MARTHA M. ALLMAN, REVIEWER
SOURCE I.D. #: 021-047-00055
SOURCE A.I. #: 794
ACTIVITY #: APE20080002

MINOR PERMIT REVISION - F-06-045 R1:

On October 15, 2008, U.S Smokeless Tobacco Manufacturing Company (USSTMC) filed an application to increase the operating limit of its cure preparation mixers from 1582 hours per year to 4650 hours per year. This increased operating limit results in an emissions increase of 8.29 tons/year of volatile organic compounds (VOCs). The facility currently has a voluntary VOC limit of 90 tons/year to preclude applicability of Title V requirements. The requested operating limits increase results in a total VOC potential to emit of 77.53 tons annually. This permit revision also adds a 60-gallon flavor solution tank and three tobacco steaming chambers to the list of insignificant activities.

SOURCE DESCRIPTION - F-06-045:

On July 20, 2006, U.S. Smokeless Tobacco Manufacturing Company (USSTMC) filed an application for renewal of its conditional major permit. USSTMC manufactures chewing and smoking tobacco in Christian County, Kentucky.

This permit includes a new process activity, Cure Preparation Mixers, that prepares tobacco for curing by mixing it with water, salts, flavors, and ethanol. A portion of the ethanol evaporates during mixing and during the discharge into transportation containers. The containers are not stored on site, but are transported by truck to another facility on the same day that the mixture is prepared. The permit also incorporates revisions made in previous permitting actions; the installation of a multi-cyclone for particulate emission control on a fluidized-bed dryer; the addition of laboratory fume hoods and laboratory solvent extraction activity to the insignificant activities list; the deletion of plans to install a second fluidized-bed dryer and substitution of a steam dryer for a hot water dryer in the dry flour process; deletion of Kabat use (solvent emission) on tobacco redryer; and deletion of a 500 gallon gasoline tank from the insignificant activities list.

EMISSION UNIT DESCRIPTIONS:

Emission Unit	Description
Emission Unit 01 (S101) Installed: 1978 Processing rate: 18,000 lb/hr Control: None	Tobacco Prizing Process , includes lamina feeder, tipping ordering cylinder, bundle buster, second bundle buster, sand reel, first and second ordering cylinders. Raw tobacco is manually loaded onto the processing line. The tips of the tobacco leaf/stem bundles are cut in a cutting apparatus. The tips

Emission Unit	Description
	are processed in the tipping ordering cylinder and then put into a storage container. The remainder of the raw tobacco is cut again and processed in the rest of the prizing process. At the end of the process, the tobacco can become the input into one of three processes: the Double Ram Press, which packs the tobacco in wooden storage containers (hogsheads), the Threshing Process (Emission Unit 02), or the Redryer Process (Emission Unit 03).
Emission Unit 02 (S102) Installed: 1978 Processing rate: 18,000 lb/hr Control: Fabric Filter, 98% collection efficiency	Tobacco Threshing Process , includes leaf threshers/RPL separators #1-#6, PL separators #1-#5. The process input stream for this process is the output stream from the Prizing Process (Emission Unit 01). The threshing process produces threshed leaf tobacco and tobacco stems. Stems are further processed in the Stem Drying Process (Emission Unit 04), while the threshed leaf tobacco is transferred to the Double Ram Press for packing. Prior to packing, the threshed leaf tobacco may be processed in the Redryer Process (Emission Unit 03) if necessary.
Emission Unit 03 (S103) Installed: 1978 Processing rate: 14,000 lb/hr Control: None	Tobacco Redryer (Strip Dryer), includes redryer conveyor, redryer. Leaf tobacco that has been conditioned in the prizing process, or conditioned and threshed, is dried by this process. The dryer is heated via steam from the boilers. The output is packed into hogsheads by the Double Ram Press.
Emission Unit 04 (S104) Installed: 1978 Processing rate: 5000 lb/hr Control: None	Stem Dryer. Tobacco stems from the threshing process are dried, then put into storage containers.
Emission Unit 05 (201) Installed: 1980 Upgraded: 1998, New dryer in 2002 Processing rate: 24,000 lb/hr Control: Fabric Filter, 98% collection efficiency	Dry Flour Casing , including lamina feeder, lamina picker, casing cylinder, bulking bins, conveyors. Tobacco leaf and stems that were stored in hogsheads is cased then stored in bulking bins until needed for dry flour processing.
Emission Unit 06 (202A and 202B) Installed: 1980 Upgraded: 1998, New dryer in 2002 Processing Rate: 10,000 lb/hr each line Control: Fabric Filter, 98% collection efficiency	Dry Flour Lines A and B , includes conveyors, cutters, sifters, dryers #1 (DLL), #2 (Legg), Dryer #1 (Fluidized-bed), Silos. Cased tobacco from the bulking bins are used in this process to make dry flour, which is stored in the silos, or cut tobacco that is placed in shipping containers. The heat source for the fluidized-bed dryer is natural gas, while the Legg dryer is heated by hot water from the boilers. The DLL dryer is to be installed in the future and will be heated by steam.

Emission Unit	Description
Emission Unit 07 (301) Installed: 1978	Boiler 1 , 17mmBtu/hour, natural gas primary fuel, propane backup fuel. Used to provide steam/hot water to dryers.
Emission Unit 08 Installed: 1978	Boiler 2 , 17 mmBtu/hour, natural gas primary fuel, propane backup fuel. Used to provide steam/hot water to dryers.
Emission Unit 09 Installed: 1980	Boiler 3 , 25 mmBtu/hour, natural gas primary fuel, propane backup fuel. Used to provide steam/hot water to dryers.
Emission Unit 10 Installed: December 2000	Emergency Generators , two 750 kW, one 350 kW, diesel fuel
Emission Unit 11 Installed: 1994 Processing rate: 7.5 gal/hr- three buildings, 1440 gal/yr	Pesticide Fogging Pesticide Fumigation
Emission Unit 12 Installed: New construction Processing rate: 11500 lbs/hr.	Cure Preparation Mixers , 4 rotary batch mixers, used to mix raw tobacco with ethanol (total ethanol usage rate is 36 lbs/hour)

APPLICABLE REGULATIONS:

401 KAR 59:015, New Indirect Heat Exchangers.

401 KAR 59:010, New Process Operations.

401 KAR 63:020, Potentially hazardous matter or toxic substance

EMISSION AND OPERATING CAPS DESCRIPTION:

USSTMC has the potential to be a major source for PM, NO_x and VOC emissions. However, the company has requested to be classified as a conditional major source with a federally enforceable limit not to equal or exceed 100 tons per year (12-consecutive months). Accordingly, USSTMC shall limit leaf and drying operations (source units 101, 102, 103, 201 and 202) to 4650 hours per year and total Volatile Organic Compounds (VOC) shall not equal or exceed 90 tons during any consecutive twelve month period for the entire source. The indirect heat exchangers will run for 8760 hours per year, while the emergency generators shall be limited to 500 hours per year. Pesticide fogging shall not exceed 1440 gallons/year and 576 hours/year (12-month rolling). The operation and the application of phosphine fumigant shall not exceed 3000 pounds/year and 288 hours/year.

CREDIBLE EVIDENCE:

This permit contains provisions which require that specific test methods, monitoring or recordkeeping be used as a demonstration of compliance with permit limits. On February 24, 1997, the U.S. EPA promulgated revisions to the following federal regulations: 40 CFR Part 51, Sec. 51.212; 40 CFR Part 52, Sec. 52.12; 40 CFR Part 52, Sec. 52.30; 40 CFR Part 60, Sec. 60.11 and 40 CFR Part 61, Sec. 61.12, that allow the use of credible evidence to establish compliance with applicable requirements. At the issuance of this permit, Kentucky has only adopted the provisions of 40 CFR Part 60, Sec. 60.11 and 40 CFR Part 61, Sec. 61.12 into its air quality regulations.

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